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ABSTRACT OF THE DISCLOSURE

10 A method of detecting nucleic acid fragments in
plural samples is performed by the steps of: attaching an
electroconductive label to nucleic acid fragments in one
sample and attaching a different electroconductive label
to nucleic acid fragments in another sample; preparing a
15 mixture of these samples; spotting the mixture on an
electroconductive microarray having plural electrodes
onto which probe molecules complementary to the nucleic
acid fragments are fixed, so that hybridization between
the nucleic acid fragments and the probe molecules on the
20 electroconductive microarray can proceed to form hybrid
structures; applying to the electrode an electric poten-
tial corresponding to the oxidation-reduction potential
of the former label and detecting on the electrode an
electric current; applying to the electrode an electric
25 potential corresponding to the oxidation-reduction poten-
tial of the latter label and detecting on the electrode
an electric current; and comparing the electric current
detected in the former detecting procedure and that de-
tected in the latter detecting procedure.

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